

Application No. 10/613,613  
Amendment dated June 4, 2007  
Reply to Office Action of December 6, 2006

Docket No.: 101328-0176

**AMENDMENTS TO THE DRAWINGS**

The attached Replacement Sheet replaces Figures 10 and 11.

Attachment:      Replacement sheet

**REMARKS**

The pending Office Action addresses claims 1-41, rejecting claims 11-18. Claims 1-10 and 19-41 are withdrawn from consideration.

***Amendments to the Drawings***

The Examiner objects to the drawings as failing to comply with 37 C.F.R. 1.84(p)(5). Applicant submits new drawings in compliance with 37 C.F.R 1.84(p)(5).

***Amendments to the Claims***

Applicant amends independent claim 11 to specify that the angle  $\psi$  is not equal to zero and the secondary wheel assembly is adapted to restore the angle  $\theta$  between the z and  $z_l$  axes to zero when the object tips. Support for the amendment can be found throughout the specification, for example, at page 10, lines 1-2 and page 11, lines 1-3. Claim 13 is amended to omit the angle  $\zeta$  limitation. No new matter is added.

***Rejections Pursuant to 35 U.S.C. §112***

The Examiner rejects claims 11-18 pursuant to 35 U.S.C. §112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant respectfully disagrees.

Specifically, the Examiner asserts that there is insufficient antecedent basis for “the angle  $\theta$ ” limitation of claim 11. Claim 11 is amended to specify that when the object tips an angle  $\theta$  exists between the z and  $z_l$  axes and  $\theta$  is greater than zero. Applicant also amends claim 11 to clarify that the secondary wheel assembly is adapted to restore the angle  $\theta$  to zero when the object tips. Applicant’s amendments thereby obviate the basis for this rejection.

The Examiner also asserts that the scope of claim 13 is indefinite as a result of “fudge factor” limitation. Although the Applicant believes this factor is clearly explained on page 11, lines 8-11 and 17-22 of the specification as a limitation that varies with the exact specifications of the

wheel axel, claim 13 is amended to omit the “fudge factor” limitation thereby obviating the basis for this rejection.

***Claim Rejection Pursuant to 35 U.S.C. §102***

The Examiner rejects claim 11 pursuant to 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 7,004,481 to Stanish (“Stanish”). Applicant respectfully disagrees. The Examiner asserts that “Stanish meets the broad limitations” of independent claim 11 “as the cant axis’ angle of rotation is not defined as being greater than or not equal to zero.” As indicated above, claim 11 is amended to recite that the angle  $\psi$ , which represents rotation about the cant axis, is not equal to zero thereby obviating the basis for this rejection. Accordingly, independent claim 11, as well as claims 12-18 which depend directly or indirectly therefrom, distinguish over Stanish and represent allowable subject matter.

Moreover, modifying Stanish to include a cant axis may render the device unsatisfactory for its intended purpose. As explained above, Stanish teaches *extendable axles* (36, 38). The extendable axles (36, 38) are *slidably disposed within axle cylinder* (30) and are adapted to be adjustably secured in multiple positions to allow for both wide and narrow stances. Modifying the extendable axles (36, 38) to include a cant axis would alter the alignment of the axles (36, 38) with respect to the axle cylinder (30) thereby prohibiting the sliding engagement between the axles (36, 38) and the cylinder (30). Thus, the proposed modification would render the Stanish device unsatisfactory for its intended purpose because the extendable axles (36, 38) would no longer be extendable.

Even further, one having ordinary skill in the art would have no motivation to modify the wheeled object of Stanish to include a secondary wheel assembly configuration disposed at an angle because Stanish already discloses features specifically designed to enhance stability. As explained by Stanish at col. 5, lines 36-39, “When in an extended position, axles 36, 38 provide a wider stance that helps to stabilize utility bag 10 and prevents tip overs that could damage expensive equipment.” Since Stanish specifically discloses extendable axles for stabilizing the bag (10), there is no need to modify Stanish to include an angled wheel assembly.

***Claim Rejections Pursuant to 35 U.S.C. §103***

**U.S. Patent No. 7,004,481 to Stanish ("Stanish")**

The Examiner rejects claims 12 and 13 as being obvious over Stanish. Applicant respectfully disagrees. Claims 12 and 13 depend directly or indirectly from claim 11. As explained above and acknowledged by the Examiner, Stanish fails to teach or even suggest a cant axis' angle of rotation that is not equal to zero, as required by amended claim 11. Accordingly, independent claim 11, as well as claims 12-18 which depend directly or indirectly therefrom, distinguish over Stanish and represent allowable subject matter.

**U.S. Patent No. 5,826,895 to Bradfield ("Bradfield")**

The Examiner rejects claims 11-18 as being obvious over U.S. Patent No. 5,826,895 to Bradfield ("Bradfield"). Applicant respectfully disagrees. The Examiner asserts that Bradfield teaches the claimed invention except for:

...the primary wheel assembly as including two wheels spaced apart from each other and mounted to the object body to rotate about a common axis, however, in an alternative embodiment (shown in FIG 4), Bradfield teaches a wheel assembly (92) having two wheels spaced apart and mounted to an object body (12 – identical to object body 212 described above) to rotate about a common axis (90).

The Examiner thus concludes that it would have obvious "to modify the wheeled object shown by Bradfield with the dual wheels as further disclosed, since such a modification would provide the advantage of decreasing the rolling resistance for the primary wheel(s)."

Independent claim 11, as amended, recites a passively stabilized wheeled object having an object body, at least one primary wheel assembly, and *at least one secondary wheel assembly* defined by a cant axis that is adapted to restore the angle  $\theta$  between the z and  $z_l$  axes to zero if the object tips. Bradfield fails to teach or even suggest a wheeled object having a secondary wheel assembly with such a configuration. Bradfield discloses a skateboard that has a plurality of in-line wheels rotatably mounted on a front end of the board and rear wheels disposed on either side of a rear end of the board. The Examiner asserts that the rear wheels (244, 250, 252) are defined by a

cant axis that is chosen to restore stability if the object tips. While the wheels (244, 250, 252) may be disposed at an angle with respect to the board (specifically, along the circumference of a curve), they are not mounted to restore an angle between an axis of the board and an axis relative to the earth to zero if the board tips. As explained by Bradfield at col. 5, lines 21-27, the wheels (244, 250, 252) are configured such that the skateboard (200) may be *steered* by tilting the board (212). Bradfield goes on to explain that the outer rear wheels (244) provide a greater degree of turn than the intermediate wheels (246), and the central wheel (242) is aligned with the in-line wheel assembly (218) so that the skateboard (200) will travel in a straight line when it is not tilted. In other words, the rear wheels (244, 250, 252) do not act to *restore an angle between two axes to zero* (i.e., return the skateboard to a balanced position) – the rear wheels (244, 250, 252) merely facilitate *steering*. It is the skateboard rider himself that restores the stability of the board by shifting his weight – not the configuration of the rear wheel assembly about any cant axis, as required by independent claim 11. In fact, it would be impossible for the rear wheels to be adapted to return the skateboard to a balanced position because such a configuration would prohibit steering the board – the very purpose of the rear wheel assembly.

Accordingly, independent claim 11, as well as claims 12-18 which depend directly or indirectly therefrom, distinguish over Bradfield and therefore represent allowable subject matter.

*Rejoinder*

Applicant requests that claim 19 be rejoined, as it depends from independent claim 11 and is also directed to a wheeled object. Applicant also requests the rejoinder of claims 1-10 and 32-41. The Examiner asserts that claims 1-10 and 32-41 are directed to luggage and claims 11-20 are directed to a wheeled object. However, luggage is one type of wheeled object, and thus the claims are clearly *related*. Since luggage is, indeed, a type of object one could argue that the terms luggage and object can be used interchangeably. In addition, examining claims 11-20 and claims 1-10 and 32-41 together would not be burdensome because all the claims are directed to wheeled objects.

***Conclusion***

In conclusion, Applicants submit that claims 11-18 are now in condition for allowance, and allowance thereof is respectfully requested. The Examiner is encouraged to telephone the undersigned attorney for Applicants if such communication is deemed to expedite prosecution of this application.

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Respectfully submitted,

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**Attachments**

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